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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/694,268	10/24/2000	SEIJI MISHIMA	35.C14356	2529

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EXAMINER	
TUGBANG, ANTHONY D	
ART UNIT	**PAPER NUMBER**
3729	12

DATE MAILED: 01/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/694,268	MISHIMA, SEIJI	
	Examiner	Art Unit	
	A. Dexter Tugbang	3729	

-- The MAILING DATE of this communication appears on the cover sh t with the correspondence address --

P ri d for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 December 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *29,30,41,42,49 and 50* is/are pending in the application.

4a) Of the above claim(s) *49 and 50* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *29,30,41 and 42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *11* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. The applicant's amendment filed 11/17/03 (Paper No. 10) has been fully considered and made of record.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Election/Restrictions

3. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 29, 30, 41 and 42, drawn to a process of making a single electron-emitting device, classified in class 29, subclass 846.

II. Claims 49 and 50, drawn to a process of forming multiple electron-emitting devices, classified in class 29, subclass 832.

The inventions are distinct, each from the other because of the following reasons:

4. Inventions of Groups I and II are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product (Group I) is deemed to be useful as a single electron-emitting device in a circuit board application without the need for multiple electron-emitting devices and without any light-emitting member, and the two inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the

ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

5. Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper.

6. Pending Claim 49 and newly submitted Claim 50 are directed to an invention that is independent or distinct from the invention originally claimed reasons set forth above.

Since applicant has received an action on the merits for the originally presented invention (i.e. Group I), this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, Claims 49-50 have been withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03. It noted that the original claims examined on the merits did not require a plurality of electron-emitting devices being disposed on an electron source substrate.

Claim Rejections - 35 USC § 102

7. Claims 29, 30, 41 and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Lemelson 5,866,195.

Lemelson discloses a method of manufacturing an electron-emitting device of superconductor structures (see Fig. 15) comprising: a gas removal step of removing gas (through

outlet duct 119) dissolved in a liquid containing a formation material (superconducting material) of an electroconductive or superconductive film in which an eventual electron-emitting area (region occupied by strip 111) is to be formed; a temperature adjusting step of adjusting a temperature of the liquid from which the gas is removed with the use of microwave generators 117A, 117B; and a droplet discharge means 115A-115N of discharging droplets of which the temperature is adjusted by the droplet discharge means in an ink jet manner while controlling relative positions of the droplet discharge means for discharging droplets of the liquid and a substrate (strip 111) on which the electroconductive film in which the electron-emitting area is to be formed, thereby applying the droplets to a predetermined position on the substrate.

It is noted that one "relative position" can be read as the spray location of one nozzle 115A and another "relative position" can be read as the spray location of anyone of the other nozzles 115B-115N. All of the nozzles together form a "droplet discharge means" in which each of these relative positions, i.e. locations of nozzle spray, is controlled simultaneously with the adjustment of the temperature (see col. 17, lines 35+).

Regarding Claim(s) 30 and 42, Lemelson teaches controlling the concentration of the gas dissolved in the liquid to a default value, or default values, through the use of a tank volume 114 and exhaust valve 119V (see col. 17, lines 37-43).

Regarding Claim(s) 41, any two spray locations directed by the spray nozzles 115A-115N can be read as "relative positions of the discharge means" and any other two spray locations, not read as the relative positions of nozzles 115A-115N, can be read as the "predetermined positions on the spray substrate" (strip 111).

Response to Arguments

8. Applicant's arguments with respect to Claims 29, 30, 41 and 42 (in Paper No. 10) have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Dexter Tugbang whose telephone number is 703-308-7599. The examiner can normally be reached on Monday - Friday 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9302.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0858.

A. Dexter Tugbang
Primary Examiner
Art Unit 3729

January 14, 2004